

support ring 32, as shown in FIG. 10, may be provided around the equator of the lens.

FIG. 7 shows an embodiment of the invention comprising a thick lens having an anterior surface 29 and a posterior surface 30. The body of the lens 28 is substantially paraboloid. Paraboloid for the purposes of this invention includes cylindrical, hyperboloid and paraboloid. The lens is made of a resilient material to bias the anterior and posterior surfaces against the capsular poles. This springlike action supports the lens in place such that when the capsular bag is pulled and released, the anterior and posterior surfaces approach and withdraw from each other providing focal accommodation.

The lens assemblies shown in FIGS. 5 and 7 can be inserted through an incision substantially the width of the lens then turned or be compressed for insertion.

What is claimed is:

1. An accommodative intraocular lens assembly for placement in the capsular bag of the posterior chamber of an eye from which the natural lens has been removed comprising:

an anterior converging lens having a convex anterior surface and a posterior surface, an equatorial perimeter and an optic axis said anterior lens being at least substantially as large as any permanent opening in the anterior capsule of the eye in which the lens assembly is intended to be inserted;

a posterior lens having an anterior surface, a posterior surface, an equatorial perimeter and an optic axis substantially parallel to said optic axis of said anterior lens; and

a wall extending from said equatorial perimeter of said anterior lens to said equatorial perimeter of said posterior lens forming a substantially closed cell for containing a fluid, such that as said capsular bag is pulled and release by ciliary muscles, said lenses approach and withdraw from each other to provide focal accommodation.

2. The lens assembly of claim 1 wherein said posterior lens is a converging lens.

3. The lens assembly of claim 2 wherein said posterior surface of said posterior lens is non-spherically convex.

4. The lens assembly of claim 2 wherein said posterior surface of said posterior lens has a radius of curvature in the range of 4.5 and 7 mm.

5. The lens assembly of claim 2 wherein said anterior surface of said anterior lens has a radius of curvature in the range of 17.7 and 17.9 mm.

6. The lens assembly of claim 2 wherein said posterior surface of said posterior lens has a radius of curvature in the range of 10.6 and 10.8 mm.

7. The lens assembly of claim 1 wherein said cell is substantially paraboloid.

8. The lens assembly of claim 7 wherein said wall is resilient such that said anterior and posterior lenses are biased against said capsular bag when in use.

9. The lens assembly of claim 8 wherein said wall is compressible for insertion into an incision having a length in the range of 2 to 4 mm.

10. The lens assembly of claim 1 wherein said cell is substantially discoid.

11. The lens assembly of claim 10 wherein said cell is substantially ellipsoid.

12. The lens assembly of claim 10 wherein said cell has an equatorial diameter in the range of 9 to 14 mm.

13. The lens assembly of claim 10 wherein said cell has an equatorial diameter in the range of 9 to 10 mm.

14. The lens assembly of claim 10 wherein said wall has a thickness of about 0.1 mm.

15. The lens assembly of claim 10 wherein said closed cell is inflatable.

16. The lens assembly of claim 1 wherein said anterior and posterior lenses have equatorial diameters in the range of 3 to 7 mm.

17. The lens assembly of claim 1 wherein said anterior and posterior lenses have equatorial diameters in the range of 4 to 5 mm.

18. The lens assembly of claim 1 wherein said anterior surface of said anterior lens is non-spherically convex.

19. The lens assembly of claim 1 wherein said anterior lens has a thickness in the range of 1.0 and 1.5 mm.

20. The lens assembly of claim 1 wherein said anterior surface of said anterior lens has a radius of curvature in the range of 8 and 14 mm.

21. The lens assembly of claim 1 wherein at least one of said lenses is rigid.

22. The lens assembly of claim 21 wherein said lenses are made from a polymer chosen from group consisting of methacrylates, polycarbonates, siloxanes and polysulfones.

23. The lens assembly of claim 22 wherein said wall is made from a material chosen from the group consisting of methacrylates and olefins.

24. The lens assembly of claim 1 wherein at least one of said lenses is pliable.

25. The lens assembly of claim 24 wherein said at least one pliable lens is made from a material chosen from the group consisting of gel forming polymers and polyvinyl alcohols.

26. The lens assembly of claim 25 wherein said at least one pliable lens is dehydrated prior to insertion.

27. The lens assembly of claims 24 wherein said at least one pliable lens is provided with an equatorial support ring.

28. The lens assembly of claim 1 wherein the distance between said anterior and posterior lenses is in the range of 3.5 to 5 mm.

29. The lens assembly of claim 1 wherein the distance between the anterior and posterior lenses is about 4 mm.

30. The lens assembly of claim 1 wherein the optical power of said assembly is divided between said anterior and posterior lenses.

31. The lens assembly of claim 1 wherein the power of said assembly is equal to the power of one of said lenses.

32. The lens assembly of claim 1 wherein said wall is made of a material chosen from the group consisting of methacrylates polymers, silicon polymers and olefin polymers.

33. The lens assembly of claim 1 wherein said lens assembly forms a resilient paraboloid.

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